



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
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D2893-1**Job Sheet 211586****Part No:** D2893-1**Job Qty:** 8 pcs**Part Name:** Support**Part Weight:** 0 lbs**Status:** New**Priority:** Medium**Job Created:** 7/21/20**Job Tracking No:****Due Date:** 9/8/20**Created By:** Marie Lajeunesse**Type:** Stock**Description:**

Note: DWG D2893 REV D IPP: C 02.11.26 Reformat; Added P/O KJ IPP D 06.04.19 removed alodine EC IPP Rev:E
Added priming as per Rev B 07-04-30 JLM IPP F 08.03.19 Re-format EC verified by: DD IPP Rev:G 08-05-15
add QC14 DD verified by:EC IPP Rev:H 11.08.04 as per dwg rev.C ver:ECDWG /IPP Rev. I 19.10.01 New
issue DP Verify DD

Ship Via:**Bill of Materials****Job Routing**

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	HAAS 4 Axis	8 pcs	9/7/20		2.00	20.00	HAAS - 1		
							HAAS - 2		
							HAAS - 3		
							HAAS - 4		
120	QC 8	8 pcs	9/7/20		0.00	0.00	QC 8 - 12		OK / S.F. / SC
							QC 8 - 14		
							QC 8 - 17		
							QC 8 - 20		
							QC 8 - 25		
							QC 8 - 3		
							QC 8 - 32		
							QC 8 - 33		
							QC 8 - 35		
							QC 8 - 39		
							QC 8 - 4		
							QC 8 - 44		
							QC 8 - 45		
							QC 8 - 49		
							QC 8 - 58		
							QC 8 - 8		
							QC 8 - 9		
							QC 8 - 68		
							QC 8 - 67		
							QC 8 - 1 (A)		
							QC 8 - 47		
							QC 8 - 40		
							QC 8 - 52		
							QC 8 - 23		
							QC 8 - 57		



Dart Aerospace Ltd.
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CANADA
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www.dartaerospace.com

Container No: S293872**Part:** D2893-1**Job No:** 211586**Serial No/Batch:** S293872**Revision:** D**Inspector:****Exp Date:****Instructions:** Various STC's

Date: 08/13/20

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					QC 8 - 76	
					QC 8 - 61	
					QC 8 - 66	
					QC 8 - 73	
					QC 8 - 82	
130	Crosstubes - 2 - B4B	8 pcs	9/8/20	0.00 1.33	Crosstubes - 1 - B4B	DAS
					Crosstubes - 2 - B4B	87 SEP 09 2020
					Crosstubes - 3 - B4B	9.89
					Crosstubes - 4 - B4B	
140	QC 3	8 pcs	9/8/20	0.00 0.00	QC 3 - 10	
					QC 3 - 13	
					QC 3 - 15	
					QC 3 - 17	
					QC 3 - 18	
					QC 3 - 2	
					QC 3 - 28	
					QC 3 - 3	
					QC 3 - 30	
					QC 3 - 34	
					QC 3 - 36	
					QC 3 - 41	
					QC 3 - 51	
					QC 3 - 58	
					QC 3 - 59	
					QC 3 - 68	
					QC 3 - 9	DAS
					QC 3 - 40	40
					QC 3 - 19	SEP 10 2020 9.89
					QC 3 - 43	
					QC 3 - 24	
					QC 3 - 61	
					QC 3 - 81	
					QC 3 - 82	
					QC 3 - 87	
170	Packaging 3-1 - Stock - B4B	8 pcs	9/8/20	0.00 0.00	Packaging 3 - 1 - B4B	
					Packaging 3 - 2 - B4B	
					Packaging 3 - 3 - B4B ✓	DAS
					Packaging 3 - 4 - B4B	SEP 10 2020 80
					Packaging 3 - 5 - B4B	LE 050 9.89
					Packaging 3 - 6 - B4B	
					Packaging 3 - 7 - B4B	
					Packaging 3 - 8 - B4B	
					Packaging 3 - 9 - B4B	
					Packaging 3 - 10 - B4B	
					Packaging 3 - 11 - B4B	
					Packaging 3 - 12 - B4B	
					Packaging 3 - 13 - B4B	
					Packaging 3 - 14 - B4B	
					Packaging 3 - 15 - B4B	
					Packaging 3 - 16 - B4B	
					Packaging 3 - 17 - B4B	
					Packaging 3 - 18 - B4B	
					Packaging 3 - 19 - B4B	
					Packaging 3 - 20 - B4B	
					Packaging 3 - 21 - B4B	
					Packaging 3 - 22 - B4B	
					Packaging 3 - 23 - B4B	
					Packaging 3 - 24 - B4B	
					Packaging 3 - 25 - B4B	

				Packaging 3 - 26 - B4B	
				Packaging 3 - 27 - B4B	
				Packaging 3 - 28 - B4B	
				Packaging 3 - 29 - B4B	
				Packaging 3 - 30 - B4B	
				Packaging 3 - 31 - B4B	
				Packaging 3 - 32 - B4B	
				Packaging 3 - 33 - B4B	
				Packaging 3 - 34 - B4B	
				Packaging 3 - 35 - B4B	
				Packaging 3 - 36 - B4B	
				Packaging 3 - 37 - B4B	
180 QC 21 - SA	8 pcs	9/8/20	0.00 0.00	QC 21 - SA - 21	
				QC 21 - SA - 70	
				Broussard	
				QC 21 - SA - 9	SEP 10 2020
				QC 21 - SA - 77	

Part Op 100 - (HAAS CNC Vertical Machine) 1-Machine as per Folio FA081

Descriptions: 120 - (QC8- Inspect parts - second check)

130 - (Crosstubes) Per note 8 on page 1 of dwg D2893, Prep inner concave surface of support and use DT10660 apply 3M Scotch-Weld as per dwg. **5 206999**

140 - (QC3- Inspect Part Finish)

170 - (Identify as per dwg & Stock Location: _____) LOCATION : LG050

180 - (QC21- Final Inspection - Work Order Release)

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
DSK078	D2893-1 Turning Detail	4 pcs (.5 ea)	100-HAAS 4 Axis	5285675 X4

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-HAAS 4 Axis	DSK078	4	8	0

Part Specifications					
Spec No	Description	Target/Tolerance	Limits	Type	Special Comments
1	2.750 Support	2.985Inches + 0.020 - 0.000	3.005 2.985		
2	2.750 Support	0.440Inches + 0.020 - 0.000	0.460 0.440		
3	2.750 Support	0.125Inches + 0.035 - 0.000	0.160 0.125		
4	2.750 Support	0.040Inches + 0.020 - 0.000	0.060 0.040		
5	2.750 Support	0.188Inches + 0.005 - 0.000	0.193 0.188		
6	2.750 Support	0.125Inches + 0.035 - 0.000	0.160 0.125		
7	2.750 Support	0.140Inches + 0.020 - 0.000	0.160 0.140		
8	2.750 Support	1.360Inches + 0.040 - 0.000	1.400 1.360		
9	2.750 Support	0.040Inches + 0.020 - 0.000	0.060 0.040		
10	2.750 Support	1.190Inches + 0.040 - 0.000	1.230 1.190		
11	2.750 Support	0.010Inches + 0.010 - 0.000	0.020 0.010		
12	2.750 Support	0.053Inches + 0.020 - 0.000	0.073 0.053		
13	2.750 Support	0.240Inches + 0.020 - 0.000	0.260 0.240		
14	2.750 Support	2.518Inches + 0.020 - 0.000	2.538 2.518		
15	2.750 Support	84.390Inches + 6.000 - 0.000	90.390 84.390		
16	2.750 Support	0.261Inches + 0.005 - 0.000	0.266 0.261		
17	2.750 Support	0.053Inches + 0.020 - 0.000	0.073 0.053		

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DART AEROSPACE LTD		Work Order: 211586
Description: Ø2.750 Support		Part Number: D2893-1
Inspection Dwg: D2893	Rev: D	Page 1 of 1

FIRST ARTICLE INSPECTION DIMENSION SHEET

				Record Actual Dimensions				
Dim	Min	Max	Go/No Go Gauge	1	2	3	4	5
HAAS Section								
AA	0.125	0.160		.133	.134	.150	.153	.145
AB	0.040	0.060		.057	.057	.052	.052	.054
AC	Ø0.260	Ø0.266		.263	.263	.262	.262	.262
AD	Ø0.187	Ø0.193		.189	.189	.189	.189	.188
AE	0.240	0.250 .260		.250	.250	.250	.25	.25
AF	1.347	1.407		1.377	1.375	1.373	1.374	1.373
AG	1.200	1.240		1.215	1.215	1.214	1.209	1.213
AH	0.147	0.167		.162	.160	.16	.164	.160
AI	2.985	3.005		3.001	3.001	3.002	3.004	3.005
AJ	0.400	0.500		.450	.450	.48	.45	.45
AK	4.930	4.990		4.956	4.956	4.956	4.956	4.955
AL	0.125	0.160		.137	.137	.14	.14	.139
AM	R0.053	R0.073		.063	.063	.063	.063	.063
AN	R0.240	R0.260		.250	.250	.25	.25	.25
AO	R0.021	R0.041		R.032	R.032	.032	.032	.032
AP	0.150	0.180		.172	.172	.172	.172	.173
AQ	0.053	0.073		.063	.063	.063	.063	.063
AR	2.302	2.322		2.316	3.214	2.317	2.312	2.316
AS	0.140	0.160		.152	.143	.148	.147	.149
AT	0.040	0.060		.052	.051	.050	.049	.048
Accept/Reject								

Measured by: DAS / 20 / ALA	Date: 20/08/02
Audited by: 52	Date: 10/09/03
Preliminary Approval:	Date:

Rev	Date	Change	Revised by	Approved
A	02.12.13	New Issue	KJ/RF	
B	07.05.08	Dimension AP revised	KJ/JLM	
C	08.04.21	Reformat	KJ/JLM	
D	12.07.31	Dwg Rev updated	KJ	
E	20.02.10	Dwg Rev and Dimensions updated.	MG	NP

AR = -.007

DART AEROSPACE LTD		Work Order: 211586
Description: Ø2.750 Support		Part Number: D2893-1
Inspection Dwg: D2893	Rev: D	Page 1 of 1

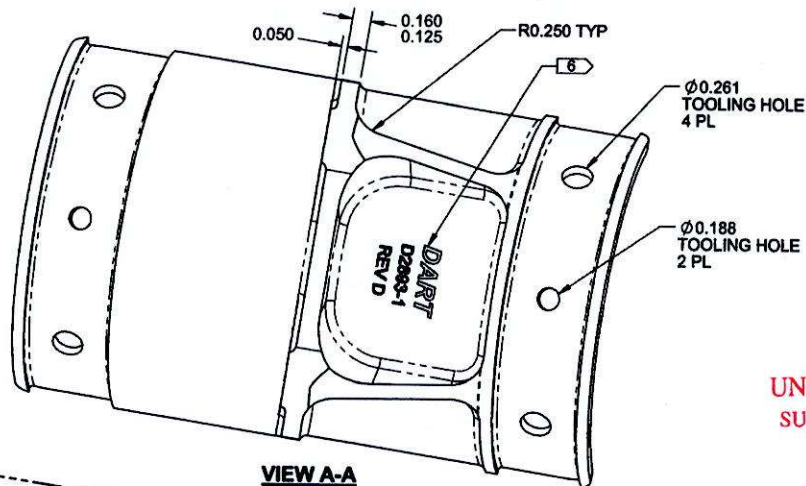
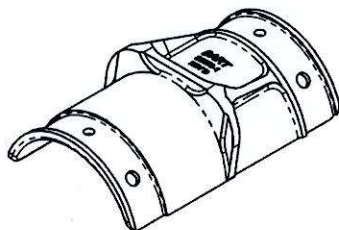
FIRST ARTICLE INSPECTION DIMENSION SHEET

				Record Actual Dimensions				
Dlm	Min	Max	Go/No Go Gauge	#6	#7	#8	4	5
HAAS Section								
AA	0.125	0.160		.147	0.147	0.147		
AB	0.040	0.060		.053	0.053	0.053		
AC	Ø0.260	Ø0.266		.262	0.262	0.262		
AD	Ø0.187	Ø0.193		.188	0.188	0.188		
AE	0.240	0.250	260	.25	0.250	0.250		
AF	1.347	1.407		1.377	1.377	1.377		
AG	1.200	1.240		1.215	1.215	1.215		
AH	0.147	0.167		.163	0.162	0.162		
AI	2.985	3.005		3.005	3.005	3.005		
AJ	0.400	0.500		.45	0.450	0.450		
AK	4.930	4.990		4.955	4.956	4.956		
AL	0.125	0.160		.139	0.139	0.139		
AM	R0.053	R0.073		.063	0.060	0.060		
AN	R0.240	R0.260		.25	0.250	0.250		
AO	R0.021	R0.041		.032	0.032	0.032		
AP	0.150	0.180		.172	0.171	0.171		
AQ	0.053	0.073		.063	0.063	0.063		
AR	2.302	2.322		2.315	2.315	2.315		
AS	0.140	0.160		.148	0.150	0.150		
AT	0.040	0.060		.048	0.048	0.048		
Accept/Reject								

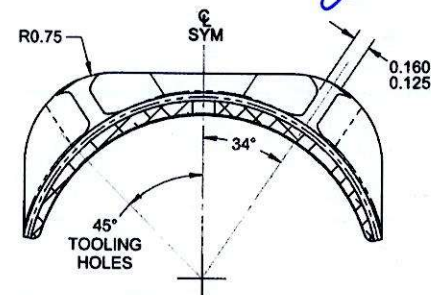
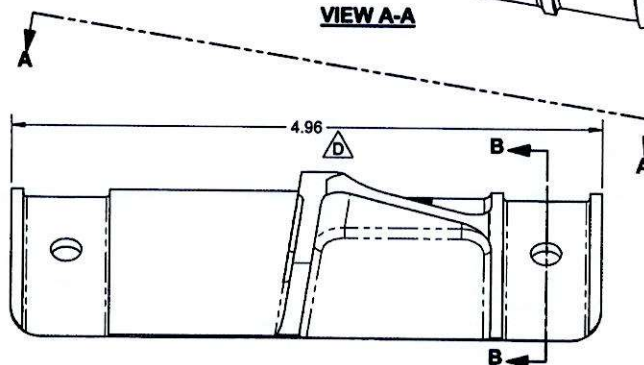
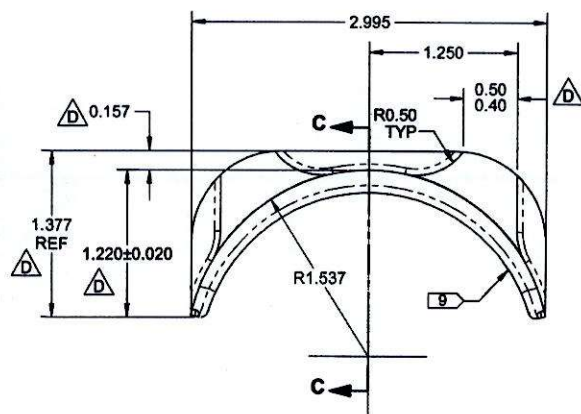
Measured by: ALA / S.C.C. DAS	Date: 20/08/12
Audited by: 52 9-89	Date: 20/09/03
Preliminary Approval:	Date:

Rev	Date	Change	Revised by	Approved
A	02.12.13	New Issue	KJ/RF	
B	07.05.08	Dimension AP revised	KJ/JLM	
C	08.04.21	Reformat	KJ/JLM	
D	12.07.31	Dwg Rev updated	KJ	
E	20.02.10	Dwg Rev and Dimensions updated.	MG	DP

AR = -.007



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SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 211586 MJS
20-07-21



D2893-1 SUPPORT, 212 FWD

SECTION B-B

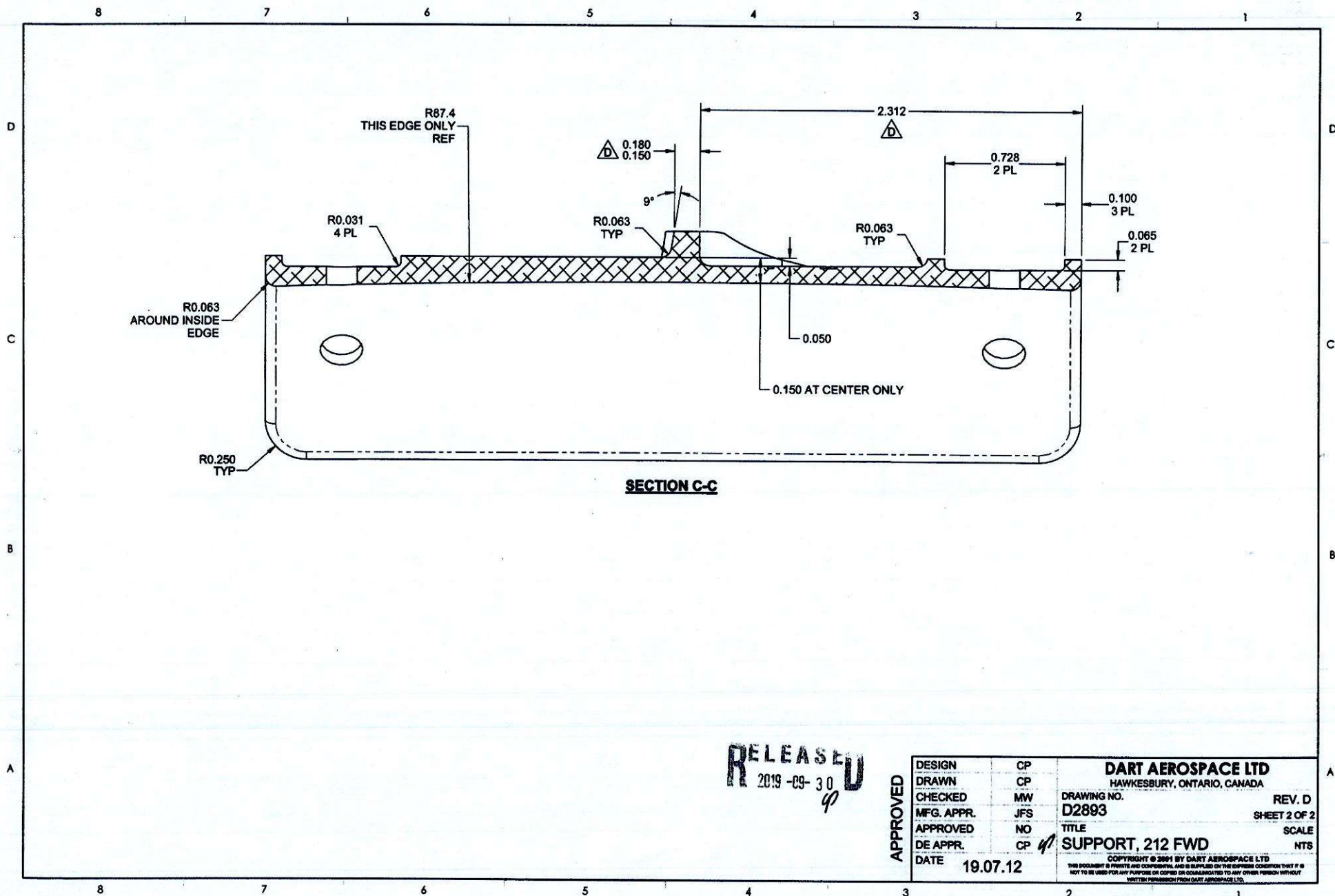
NOTES:

- 1) MATERIAL: 17-4 PH STAINLESS STEEL, H900 OR H925 CONDITION
MIN UTS = 170 KSI (38 HRC)
(REF DART SPEC. D6104)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: DART LOGO, PART NUMBER, AND REVISION IN THIS AREA WITH 0.125 HIGH LETTERING
0.010-0.020 DEEP WITH MIN TOOL RAD OF R0.010 PER DART QSI 044 6.3
- 7) WEIGHT: 0.73 lbs
- 8) MACHINE INNER SURFACE PROFILE AND NON-DIMENSIONS FEATURES PER D2893-1-REV D STEP
- 9) FOR THE ENTIRE INNER CONCAVE SURFACE: ABRASE SURFACE WITH 400-GRIT SANDPAPER. REMOVE RESIDUE WITH MEK (OR EQUIVALENT).
APPLY 0.030" THICK LAYER OF 3M SCOTCH-WELD 2216 B/A ADHESIVE TO MATING SURFACE OF SUPPORT. ALLOW TO CURE FOR 24 HOURS.

RELEASED
2019-09-30
ECN 19-025

DESIGN	CP	DART AEROSPACE LTD	REV. D
DRAWN	CP	HAWKESBURY, ONTARIO, CANADA	
CHECKED	MW	DRAWING NO.	
MFG. APPR.	JFS	D2893	SHEET 1 OF 2
APPROVED	NO	TITLE	SCALE
DE APPR.	CP	SUPPORT, 212 FWD	NTS
DATE	19.07.12	COPYRIGHT © 2004 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

APPROVED



Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐						
Date :	Sequence #:	QTY Affected :		MRB (QSI042)				
Description Work Order Deviation		Disposition			Completed By			
					Lead hand / Supervisor			
								QC / QA Coordinator
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread		Other/Details:						